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The District of Columbia Office of the Chief Financial Officer

Land Acquisition Cost Study

March 22, 2005

Deloitte & Touche LLP
Don Todd Associates, Inc.
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I. Executive Summary

The District of Columbia (the "District") passed The Ballpark Omnibus Financing and Revenue Act in 2004, and has entered into a Baseball Stadium Agreement with the District of Columbia Sport and Entertainment Commission and the Baseball Expos, L.P. to facilitate the purchase of land and construction of a baseball stadium (the "Ballpark"). Prior to entering into any obligation to acquire or purchase any property on the Ballpark site, the Office of the Chief Financial Officer ("OCFO") must provide the Mayor and the Council with cost estimates for land acquisition, environmental remediation and infrastructure requirements. The Site for the stadium to be constructed is bounded by N Street, SE, Potomac Avenue, SE, South Capitol Street, SE and 1st Street, SE (the "Site").

Deloitte & Touche LLP ("Deloitte & Touche") and its sub consultants conducted a Property Cost Study, a Phase I Environmental Study and an Infrastructure Requirements Study (the "Cost Components") on behalf of the OCFO. This cost study commenced on January 24, 2005 and this report, dated March 22, 2005 (with data updated through March 18, 2005), is being issued under the terms of our engagement letter.

The cost estimates are based on our interviews with various government agencies, documents provided by those agencies and public utilities and other documents available to the public. At the time of our cost study, an architect/engineer had not yet been commissioned to design the stadium. Where the stadium design itself was deemed to impact the Cost Components, assumptions were made, based on general stadium construction practices and the programmatic scope outlined in the Baseball Agreement. If the ultimate design of the stadium is inconsistent with these assumptions it could affect the cost estimate. In addition, the study did not include destructive testing or other engineering tests to validate soil conditions, other sub-surface conditions or to verify the accuracy of infrastructure related drawings, locations and conditions.

The property costs were developed based on the underlying market value for each privately owned parcel comprising the footprint of the ballpark Site using generally accepted valuation approaches. The estimated market value for each parcel is based on current market transaction data assuming the recent zoning changes adopted by the District and without any perceived influence from the District's recent announcement of its intention to construct the proposed stadium. The market value estimates are adjusted for demolition and environmental remediation costs where appropriate. In addition to the net market value for each parcel, total property costs also include a separate provision for relocation and legal/condemnation expenses that may be incurred by the District during the course of the acquisition process.

The infrastructure costs cover the costs related to site utilities, tunnel relocation, roadway improvements and Navy Yard Metro Rail Station improvements. These costs include infrastructure related improvements or modifications required on the Site itself as well as the costs required to deal with the continued infrastructure needs of properties adjacent to the Site that could be impacted from the proposed Ballpark. The infrastructure costs include an \$11.9 million contingency for design/estimating/market issues, which is itemized in **Appendix D**.

The environmental remediation costs were estimated based on the findings of a Phase I Environmental Site Assessment, conducted as part of this study, and is therefore based on very limited knowledge of the actual sub-surface conditions. A Phase II investigation which

seeks to determine, based on a site testing plan, the extent of known and un-known environmental conditions should be conducted to validate the preliminary estimates provided in this cost study.

The costs summarized in this section reflect the methodology and assumptions described in the contents of this report and its Appendices and should not be considered without reading the entirety of this report.

Summary of Findings	Cost Estimate
Property Costs	\$77,132,598
Environmental Costs	\$8,002,640
Infrastructure Costs * (includes \$11.9 M contingency)	\$76,217,645
Total	\$161,352,883

*Note that the infrastructure cost assumes that the Ballpark construction will require a \$29.4 million relocation of a large sewer tunnel. If the tunnel can remain in place, the infrastructure cost estimate can be reduced by \$27 million. Also note that since we do not have detailed cost breakdowns for the PECPO, Comcast and Verizon infrastructure cost estimates, there may be additional contingency beyond the \$11.9 million identified above.

Since the final stadium design may impact the infrastructure costs to some extent, the assumptions utilized to generate the cost estimates in this report should be incorporated into the design process so that potential cost increases can be identified and mitigated during the schematic design phase.

The data, documents and other information utilized to perform this study was based upon information provided by various public agencies, interviews with agency personnel and data available in the public domain. Deloitte & Touche has relied on this data and has not independently verified its accuracy or completeness. To the extent that any of the information is inaccurate or incomplete our findings could vary in a material manner. Our services were performed in accordance with the Statement on Standards for Consulting Services issued by the American Institute of Certified Public Accountants (AICPA). However, we were not engaged to perform an audit of the Project nor do our services constitute an engagement to provide audit, compilation, review or attestation services as described in the pronouncements on professional standards issued by the AICPA, and therefore we do not express an opinion or other form of assurance with respect to the financial position of the OCFO or its compliance with applicable laws and regulations. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you. Furthermore, there will usually be differences between forecasted and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material. We have no responsibility to update this report for events and circumstances occurring after the date of this report. This report was prepared for the OCFO on behalf of the District of Columbia Administration and City Council. This report must be read in its entirety, and Deloitte & Touche is not responsible for any portion of this report that is selectively quoted or otherwise used in isolation or in any summary or paraphrasing of the report that is prepared by others. Third parties who are not a party to this engagement may not rely upon any portion of this report for any reason.

II. Site Description

According to the District of Columbia's Office of Property Management, the total size of the Proposed Baseball Stadium Site is approximately 19 acres. The Private Property is comprised of 63 parcels containing a total of 602,612 square feet or 13.83 acres of land, with the remaining portion consisting of public spaces such as roadways and sidewalks. The aggregate Site is bound by N Street to the north, 1st Street to the east, Potomac Avenue to the south, and South Capitol Street to the west, as illustrated in **Figure 1**, below. The Site is bisected by Half Street in a north/south direction, and O and P Streets in an east/west direction. The parcels comprising the Proposed Baseball Stadium Site range in size from 1,331 square feet to 88,595 square feet, and most are rectangular in shape with average frontage and visibility.

The Site is generally level and at grade with most adjoining streets. The only exception is South Capitol Street, which has limited access from the Proposed Baseball Stadium Site due to its above-grade elevation. Street lights are located throughout the property, with intermittent sidewalks and curbs.

Figure 1: Stadium Location



Due to the circumstances of this engagement, it was not possible to gain access to the interior of most structures on the Proposed Baseball Stadium Site. Existing improvements on the Proposed Baseball Stadium Site are predominantly industrial, comprised primarily of older, single-story masonry buildings. The property is also improved with five single-family row houses, a three-story building that appears to include a ground floor garage with offices above, several night clubs, a recycling facility containing two high-bay shell buildings, and an asphalt production plant that consists primarily of equipment, with no significant permanent structures. The “Ballpark Development Project Property Matrix” included in this analysis (see **Figure 2**) identifies 33 “economic units” (which represent single or contiguous parcels with a single common ownership entity) that comprise the Proposed Baseball Stadium Site, including their current improvements. In addition, tax parcel maps outlining each economic unit are also presented.

III. Property Costs

The Property Cost Study involved the systematic research and analysis necessary to reasonably estimate the costs (both direct and indirect) to acquire the Site. The Site, approximately 19 acres, includes 63 privately-owned parcels of land (the "Private Property") containing a total of 13.83 acres. Additional land for the Proposed Stadium will come from public rights-of-way and a city-owned parcel at the southeast corner of the Site. The additional land is not included in this analysis. As an initial step in the study, the individual private parcels were assembled into 33 economic units, which represent single or contiguous parcels with a single common ownership entity. Each economic unit was physically inspected, to the extent possible, in order to gain an understanding of the current and potential uses of the Private Property.

The area surrounding the Site is part of the District's long-term urban renewal plan and is currently in the redevelopment stage of its neighborhood life cycle. All of the parcels comprising the Private Property were recently re-zoned "CG/CR, Mixed Use (Commercial Residential) District within the Capitol Gateway Overlay District", which has had a favorable impact on the desirability and development potential of the Private Property.

The direct property costs considered in our study include the underlying market value for each of the economic units comprising the Private Property through the use of relevant appraisal approaches. The appraisal process produced a market value estimate based on the highest and best use of each economic unit comprising the Private Property without regard to the District's recent announcement of its intention to construct the Proposed Baseball Stadium. This is in conformance with the District's position that "Just compensation for property taken by the government in a condemnation proceeding is the full money equivalent of the property taken. Courts adopt market value as a rough equivalent of value to the owner. For condemnation purposes, just compensation will not take into account any increase in the value of the land because of the public investment in the stadium."

Additionally, cost adjustments for the demolition of existing structures and environmental remediation costs were applied where appropriate.

The property cost study also included estimates to relocate the existing legally operated businesses and related indirect expenses such as legal/condemnation costs that may be incurred during the acquisition process. Indirect costs were estimated based on our study of the District of Columbia Municipal Regulations, the Uniform Relocation Assistance and Real Property Acquisition Policies Act, and condemnation statistics collected by the Federal Highway Administration.

Finally, the property cost study addresses available financing options and grants to consider for the soil remediation costs.

The Property Costs for each economic unit are presented in **Figure 2**, below. Additional information regarding each economic unit is provided in **Section IV**.

Figure 2: Property Cost Matrix

Unit	Square	Lot	Property Address	Land (SF)	Bldg (SF)	Building Type	Current Use	Market Value
1	702	106	7 N St SE	8,530		Vacant Land	Vacant Land	\$1,169,210
	702	807	N St SE					
	702	808	N St SE					
	702	826	1300 South Capitol St SE					
	702	859	South Capitol St SE					
	702	860	9 N St SE					
	702	861	11 N St SE					
	702	866	South Capitol St SE					
	702	869	N St SE					
2	702	126	1352 South Capitol St. SE	4,376	3,639	Office/Street Level Retail	Unknown	524,020
3	702	852	South Capitol St SE	1,682		Vacant Land	Vacant Land	228,438
4	702	853	South Capitol St SE	1,331		Vacant Land	Vacant Land	180,127
5	702	127	1345 Half St SE	20,070	19,867	Industrial	Night Club	2,458,746
6	702	804	31 N St SE	8,857		Vacant Land	Tow Truck Impound Lot	1,202,255
	702	805	N St SE					
	702	845	25-29 N St SE					
7	702	841	20 O St SE	10,001	14,960	Industrial Warehouse	"Bath House Chain"	1,109,921
8	702	846	1342 South Capitol St SE	17,994	2,944	Aamco	Transmission Repair	2,335,099
9	702	851	South Capitol St SE	3,013		Vacant Land	Vacant Land	449,934
	702	857	South Capitol St SE					
10	702	858	South Capitol St SE	1,345		Vacant Land	Vacant Land	180,281
11	702	854	South Capitol St SE	1,331		Vacant Land	Vacant Land	178,354
12	702	856	South Capitol St SE	1,331		Vacant Land	Vacant Land	178,354
13	702	855	South Capitol St SE	12,721		Vacant Land	Tow Truck Impound Lot	1,901,189
	702	868	South Capitol St SE					
14	702	37	21 N St SE	5,799	3,500	Single-family Residential & Vacant Land	Single-family Residential & Vacant Land	695,716
	702	38						
	702	39						
15	702	104	3 N St SE	3,072		Vacant Land	Vacant Land	417,982
	702	105	5 N St SE					
	702	867	N St SE					
16	702	806	Half St SE	1,400		Vacant Land	Vacant Land	178,541
17	702	862	13 N St SE	6,371	3,500	Single-family Residential	Single-family Residential	210,159
18	702	863	15 N St SE			Single-family Residential	Single-family Residential	210,159
19	702	864	17 N St SE			Single-family Residential	Single-family Residential	210,159
20	702	865	19 N St SE			Single-family Residential	Single-family Residential	210,159
21	702	79	1315 Half St SE			Vacant Land	Tow Truck Impound Lot or Junkyard	2,995,967
	702	80	1315 Half St SE					
	702	81	1315 Half St SE					
	702	82	1315 Half St SE					
	702	83	1315 Half St SE					
	702	84	1315 Half St SE					
	702	85	1315 Half St SE					
	702	836	1315-1317 Half St SE					
22	702	870	Half St SE	36,752	15,595	Industrial Warehouse w/ Office	Large truck repair shop	4,407,569
	702	871	1331 Half St SE					
23	703	5	1338 Half St SE	9,588	16,591	Industrial Warehouse	Artist Studio	999,363
24	703	6	Half St SE	19,176	25,344	Industrial Warehouse	Unknown	2,255,579
	703	7	1326 Half St SE					
25	703	8	1318 Half St SE	9,588	9,340	Industrial Warehouse	Car Repair Shop	1,203,681
26	703	53	60-80 O St SE	67,119		Paved Parking Lot	Paved Parking Lot	9,071,213
27	703	54	1315 1st St SE	53,418	17,329	Industrial Warehouse	Garbage Transition Sub-station	7,100,161
28	703	819	SE	24,651	15,601	Industrial Warehouse	Appears vacant	3,382,914
	703	821	65 N St SE					
	703	822	65 N St SE					
29	704	11	1400-1430 South Capitol St SE	88,595	81,496	Industrial Warehouse	Warehouse/office	10,204,967
30	705	15	60 P St SE	88,100		Asphalt Plant	Asphalt Plant	9,865,002
31	706	802	South Capitol St SE	3,233		Vacant Land	Vacant Land	298,213
32	706	806	31-41 P St SE	57,567	28,176	Industrial Warehouse	Warehouse/office	6,264,294
	706	807	24 Potomac Ave SE					
	706	808	South Capitol St SE					
33	706	809	1522 South Capitol St SE	12,513		Vacant Land	Vacant Land	1,404,871

OVERALL SUMMARY - Land Acquisition Cost Estimate	
Market Value:	\$73,682,599
Add: Condemnation/Legal Cost Estimate	2,500,000
Add: Business & Residence Relocation Cost Estimate	950,000
Total Land Acquisition Cost Estimate	\$77,132,599
Total Land Acquisition Cost Estimate (Rounded)	\$77,000,000

IV. Environmental Costs

A Phase I Environment Site Assessment for the Site was conducted in accordance with the requirements and limitations of ASTM 1527 – 2000. Environmental conditions were observed and are documented by Economic Unit, below, and additional assessment is recommended to further assess and quantify the identified environmental conditions.

The Site has been used since the 1700s for various types of residential, commercial; and industrial uses. The surrounding properties are similarly developed and include Federal facilities, a Pumping Station to the east, Concrete plant and Bulk Petroleum Storage facilities to the south, a major highway into the City to the west and residential, commercial, industrial facilities to the north. The area north of the Site is occupied by known Leaking Underground Storage Tanks (LUST) sites and appears to have had significant petroleum releases in the past. These sites all appear to be up-gradient from the subject site.

Based on the data collected during this Environmental Site Assessment, specific known environmental liabilities were identified and are described by economic unit below. Based on the size, complexity, limited data, past and current use of the individual lots, additional investigation is warranted to accurately quantify the environmental issues associated with each economic unit and with the public spaces associated with the site. A cost estimate to remediate the environmental Costs, provided in **Figure 3**, was estimated using the following assumptions:

- This estimate is based on a preliminary investigation of the site and additional investigation has been recommended to refine the estimate and further clarify the Environmental issues associated with each property.
- There are no unusual access, noise or work hour restrictions
- Bid, payment or performance bonds required.
- Estimate assumes current property owner will remove useable products from Site
- Owner will obtain general building and raze Permits
- Permit cost for individual remediation are included in Estimate
- Raze Permit Costs Are not included
- Public Space Permit Costs are not included
- This estimate is based on Owners removing all usable products of a hazardous or regulated nature prior to remediation. This includes removing all vehicles and associated parts.
- The estimate is based on minimal project management time to direct additional investigations and oversee remediation of known environmental conditions.
- Unrestricted access to work site after release to investigate & remediate
- This estimate does not include cost to process any contaminated liquids that may be generated during demolition or dewatering operations.

- This estimate is based on this being a coordinated remedial action and not individual stand alone remediation.
- This estimate is based on the asphalt plant equipment and associated tanks being relocated prior to investigation and remediation of the site.
- The soil excavation/loading/transportation and disposal cost is based on Non-hazardous petroleum contamination
- Conditions other than those indicated in the above assumptions and specifically indicated in the cost estimate will result in cost differentials.

Figure 3: Environmental Remediation Cost Estimate

Economic Unit	Square	Block	Lot	Property Address	Assessed Owner Name	Land (SF)	Bldg (SF)	Estimated Environmental Cost	Soil Contamination Cost Estimate	Remedial Cost Estimate
1	702	1	106	7 N St SE	1352-1354 C	8,530		\$ 4,842	\$ 56,859	\$ 61,701
	702	1	807	N St SE						
	702	1	808	N St SE						
	702	1	826	1300 South Capitol St SE						
	702	1	859	South Capitol St SE						
	702	1	860	9 N St SE						
	702	1	861	11 N St SE						
	702	1	866	South Capitol St SE						
	702	1	869	N St SE						
2	702	1	126	1352 South Capitol St. SE	1352-1354 C	4,376	3,639	\$ 7,027	\$ 29,169	\$ 36,197
3	702	1	852	South Capitol St SE	1352-1354 C	1,682		\$ 3,069	\$ 11,212	\$ 14,281
4	702	1	853	South Capitol St SE	1352-1354 C	1,331		\$ 3,069	\$ 8,872	\$ 11,941
5	702	1	127	1345 Half St SE	Robert Siegel	20,070	19,867	\$ 15,675	\$ 133,781	\$ 149,456
6	702	1	804	31 N St SE	N Street SE	8,857		\$ 16,804	\$ 59,038	\$ 75,843
	702	1	805	N St SE						\$ -
	702	1	845	25-29 N St SE						\$ -
7	702	1	841	20 O St SE	William Cohen	10,001	14,960	\$ 17,239	\$ 66,664	\$ 83,903
8	702	1	846	1342 South Capitol St SE	Richard A B	17,994	2,944	\$ 34,878	\$ 119,943	\$ 154,821
9	702	1	851	South Capitol St SE	1316 South C	3,013		\$ 4,842	\$ 20,084	\$ 24,926
	702	1	857	South Capitol St SE						\$ -
10	702	1	858	South Capitol St SE	1316 South C	1,345		\$ 4,842	\$ 8,965	\$ 13,807
11	702	1	854	South Capitol St SE	South Capito	1,331		\$ 4,842	\$ 8,872	\$ 13,714
12	702	1	856	South Capitol St SE	South Capito	1,331		\$ 4,842	\$ 8,872	\$ 13,714
13	702	1	855	South Capitol St SE	Donohoe Co	12,721		\$ 18,892	\$ 84,795	\$ 103,687
	702	1	868	South Capitol St SE					\$ -	\$ -
14	702	2	37	21 N St SE	Kenneth B V	1,933		\$ 13,576	\$ 12,885	\$ 26,461
	702	2	38	N St SE	Kenneth B V	1,933		\$ 4,842	\$ 12,885	\$ 17,727
	702	2	39	N St SE	Kenneth B V	1,933		\$ 4,842	\$ 12,885	\$ 17,727
15	702	2	104	3 N St SE	N Street LLC	3,072		\$ 4,842	\$ 20,477	\$ 25,319
	702	2	105	5 N St SE					\$ -	\$ -
	702	2	867	N St SE					\$ -	\$ -
16	702	2	806	Half St SE	Paka Inc	1,400		\$ 4,842	\$ 9,332	\$ 14,174
17	702	2	862	13 N St SE	George J Qu	6,371		\$ 17,605	\$ 42,467	\$ 60,072
18	702	2	863	15 N St SE	George J Qu				\$ -	\$ -
19	702	2	864	17 N St SE	George J Qu				\$ -	\$ -
20	702	2	865	19 N St SE	George J Qu				\$ -	\$ -
21	702	3	79	1315 Half St SE	Federal Eagl	23,088		\$ 28,283	\$ 153,899	\$ 182,181
	702	3	80	1315 Half St SE						\$ -
	702	3	81	1315 Half St SE						\$ -
	702	3	82	1315 Half St SE						\$ -
	702	3	83	1315 Half St SE						\$ -
	702	3	84	1315 Half St SE						\$ -
	702	3	85	1315 Half St SE						\$ -
	702	3	836	1315-1317 Half St SE						\$ -
	702	3	838	1315 Half St SE						\$ -
22	702	3	870	Half St SE	1331 Half St	36,752	15,595	\$ 40,816	\$ 244,979	\$ 285,795
	702	3	871	1331 Half St SE					\$ -	\$ -
23	703	2	5	1338 Half St SE	Patricia Ghi	9,588	16,591	\$ -	\$ 63,911	\$ 63,911
24	703	2	6	Half St SE	E M Warrin	19,176	25,344	\$ 59,144	\$ 127,822	\$ 186,966
	703	2	7	1326 Half St SE					\$ -	\$ -
25	703	2	8	1318 Half St SE	Joseph Luka	9,588	9,340	\$ 47,885	\$ 63,911	\$ 111,796
26	703	2	53	60-80 O St SE	SE Land Dev	67,119		\$ 32,918	\$ 447,398	\$ 480,315
27	703	2	54	1315 1st St SE	WSI Acquisi	53,418	17,329		\$ 356,070	\$ 356,070
28	703	2	819	SE	RLG Realty	24,651	15,601	\$ 35,030	\$ 164,317	\$ 199,347
	703	2	821	65 N St SE					\$ -	\$ -
	703	2	822	65 N St SE					\$ -	\$ -
29	704	3	11	1400-1430 South Capitol S	Government	88,595	81,496	\$ 176,955	\$ 590,551	\$ 767,507
30	705	1	15	60 P St SE	Roubin Asso	88,100		\$ 1,299,530	\$ 587,252	\$ 1,886,781
31	706	3	802	South Capitol St SE	William T M	3,233		\$ 39,273	\$ 21,550	\$ 60,824
32	706	3	806	31-41 P St SE	Schroff Real	57,567	28,176	\$ 291,521	\$ 383,727	\$ 675,248
	706	3	807	24 Potomac Ave SE					\$ -	\$ -
	706	3	808	South Capitol St SE					\$ -	\$ -
33	706	3	809	1522 South Capitol St SE	William LP	12,513		\$ 67,758	\$ 83,408	\$ 151,166
34						251,324			\$ 1,675,260	\$ 1,675,260
Totals						853,936		\$ 2,310,525	\$ 5,692,115	\$ 8,002,640

Discussion by Economic Unit

As part of this study we attempted to contact owners and operators by phone and by site visit to obtain permission to access the facility and conduct the assessment and interviews. Where possible interviews were conducted and a site contact form was completed and the information gathered has been included in the text of this report. Site Contact Forms are presented in Appendix 8 to the Phase I Environmental Site Assessment. The site reconnaissance and interview results are organized by economic units and are presented in this section.

Economic Unit 1

Economic Unit 1 is located in the northwest square of the subject property. The property is identified as Square 702 Lots 106, 807, 808, 826, 859, 860, 861, 866, and 869. The addresses are listed as various locations along South Capitol Street SE and N Street SE. The existing DC tax property detail indicate the owner is the 1352-1354 Corporation and the land is currently used as a garden and does not have any structures associated with it.

Some minor dumping of household debris and waste was observed. The previous presence of residences and commercial operation of the property indicate there may be the presence of buried tanks that have no surficial indications and construction debris may have been used as backfill for basements and site leveling. The presence of an active gas station adjacent and directly up gradient of the site is a known LUST site and several other up-gradient sources of potential petroleum contamination indicate this property may be impacted by adjoining sites.

Economic Unit 2

Economic Unit 2 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 126. The address is listed as 1352 South Capitol Street SE. The existing DC tax property detail indicate the owner is the 1352-1354 Corporation and the land is currently indicated as an office and street level retail structure. The lot is improved by a masonry/brick building.

Located at the North West corner of the building along South Capitol Street SE a pipe was observed that could indicate a potential underground storage tank (UST) vent. The interior of this location was not accessible for inspection. Based on the age and type of construction there is an elevated potential the roofing material is Potential Asbestos Containing Building Materials (PACBM). The interior of the facility should be accessed to determine the presence of PACBM and other environmental concerns associated with the scope of the Phase I Assessment.

Economic Unit 3

Economic Unit is located in the northwest square of the subject property. The property is identified as Square 702 Lot 852. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the 1352-1354 Corporation, and the land is currently indicated as vacant land.

Economic Unit 4

Economic Unit 4 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 853. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the 1352-1354 Corporation, and the land is currently indicated as vacant land.

Economic Unit 5

Economic Unit 5 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 127. The address is listed as 1345 Half Street SE. The existing DC tax property detail indicates the owner is Robert Siegel. The land is currently improved with a brick and masonry structure with a stucco exterior. The building was formerly used as a laundry facility, and is currently used as an entertainment venue.

The 1937 Baist's Real Estate Atlas indicates this location was previously partially occupied by the Mayfair Laundry that was located at the corner of Half street SE and O Street SE.

The 1959 Sanborn Fire Insurance maps indicate this location was previously occupied by Standard Carpet Cleaning Company and the Senate Laundry.

Additional investigation of this property is warranted to assess the interior. Based on the age and type of construction there is an elevated potential the roofing material is Asbestos Containing Building Material (ACBM). The interior of the facility should be accessed to determine the presence of PACBM and other environmental concerns. The facility was historically used as a laundry and this also warrants additional investigation for solvents, dye constituents, and metals.

Economic Unit 6

Economic Unit 6 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 804, 805, & 845. The address is listed as 25-31 N Street SE. The existing DC tax property detail indicates the owner is the N Street SE JV LLC. The land is currently vacant and is used as a tow truck lot.

The Sanborn maps indicate residences at this location were occupied by residences in 1928 that are no longer present in the later maps.

The title abstract was reviewed and indicates the fee simple title is in the name of N Street SE JV LLC. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

The previous presence of residences indicates the potential presence of buried tanks that have no surficial indications and construction debris may have been used as backfill for basements and site leveling. The use of the property for storage of vehicles indicates an elevated potential for petroleum impacts that should be further investigated.

Economic Unit 7

Economic Unit 7 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 841. The address is listed as 20 O Street SE. The existing DC

tax property detail indicates the owner is the William Cohen Et Al. The land is currently indicated as an industrial warehouse facility. The facility is a 2 story brown brick structure and is currently used as an entertainment facility that has been operated as such for approximately 30 years.

Prior uses are reported to be for fireworks production. There is the potential that the facility has ACBM fireproofing systems installed. A number of potential asbestos containing materials were observed. Samples of wall plaster were collected and submitted for analysis and asbestos fibers were not detected in the limited sampling performed. A single sample of paint was collected and was not identified as LBP.

The 1959 Sanborn Fire Insurance maps indicate this location was previously occupied by a cold storage company.

Additional investigation of this property is warranted due to the previous use as a fireworks facility.

Economic Unit 8

Economic Unit 8 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 846. The address is listed as 1342 South Capitol Street SE. The existing DC tax property detail indicates the owner is Richard Biggs Trustees and Nancy Biggs. The land is currently improved by a one story masonry building that is used as an AAMCO transmission facility. The facility is reported to have been occupied by the current operator for approximately 3 years. There are two above ground storage tanks on the site and several hydraulic lifts. The facility is very densely occupied by vehicles and maintenance operations and an accurate determination of potential buried tanks was not possible. Several groundwater monitoring wells were discovered and this may indicate the potential presence of a subsurface release associated with an Underground storage tank. These wells are not indicated in the available DCEHA Data.

The 1959 Sanborn Fire Insurance maps indicate this location was previously occupied by the Square Deal Trucking Company a trash removal firm.

Additional investigation for the presence of petroleum contamination from the historic use as a trash company and the current use as a vehicle repair facility is indicated. The existing wells should be properly abandoned.

Economic Unit 9

Economic Unit 9 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 851 and 857. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the 1316 South Capitol LLC and the land is currently vacant. The site is currently used for vehicle parking and storage.

The title abstract was reviewed and indicates the fee simple title is in the name of 1316 South Capitol Street LLC. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

Economic Unit 10

Economic Unit 10 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 858. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the 1316 South Capitol LLC and the land is currently vacant. The site is currently used for vehicle parking and storage.

The title abstract was reviewed and indicates the fee simple title is in the name of 1316 South Capitol Street LLC. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

Economic Unit 11

Economic Unit 11 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 854. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the South Capitol Street JV. The land is currently vacant. The site is currently used for vehicle parking and storage.

The title abstract was reviewed and indicates the fee simple title is in the name of South Capitol Street Joint Venture. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

Economic Unit 12

Economic Unit 12 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 856. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the South Capitol Street JV. The land is currently vacant. The site is currently used for vehicle parking and storage.

Economic Unit 13

Economic Unit 13 is located in the northwest square of the subject property. The property is identified as Square 702 Lots 855 & 868. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the Donohoe Company Inc. The land is currently vacant. The site is currently used for a tow truck company and vehicle parking and storage.

The title abstract was reviewed and indicates the fee simple title is in the name of Donohoe Construction Co. Inc., ADC Corporation as to an undivided one-half interest and 1352-1354 Corporation as to an undivided one-half interest. The property appears to have two equal owners. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property. The Harrison Bros, Inc. is listed as an owner in 1937.

The 1904 Sanborn Fire Insurance maps indicate this location was previously occupied by the Borgman Mfg Company a Wood Planing and Saw Mill Company.

The 1928 Sanborn Fire Insurance maps indicate this location was previously occupied by waste material yard.

Additional investigation for the presence of petroleum contamination from the historic use as a waste material company and the current use as a vehicle towing, repair and storage facility is indicated.

Economic Unit 14

Economic Unit 14 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 37, 38, & 39. The address is listed as 21 N Street SE. The existing DC tax property detail indicates the owner is the Ken Wyban and the land is improved by a house and garage and two adjacent empty lots that are currently vacant.

The title abstract was reviewed and indicates the fee simple title is in the name of Kenneth B Wyban. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property. The title abstract lists the Potomac Development Corporation in 1976.

There is a potential mechanical pit in the garage that is covered with boards.

Additional investigation of this property is warranted to assess the interior. The interior of the facility should be accessed to determine the presence of PACBM and other environmental concerns.

Economic Unit 15

Economic Unit 15 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 104, 105 & 867. The address is listed as 3 & 5 N Street SE. The existing DC tax property detail indicates the owner is the N Street JV and the land is currently vacant and used as part of a garden.

The title abstract was reviewed and indicates the fee simple title is in the name of N Street LLC. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

The available information indicates the properties were historically improved by single family homes that have been demolished. There is an elevated potential that buried construction debris and tanks may be present.

Economic Unit 16

Economic Unit 16 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 806. The address is listed as Half Street SE. The existing DC tax property detail indicates the owner is the PAKA Inc. The land is currently vacant and is used for the storage of vehicles.

The title abstract was reviewed and indicates the fee simple title is in the name of PAKA Incorporated. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

The available information indicates the properties were historically improved by single family homes that have been demolished. Based on the historic and current use here is an

elevated potential that petroleum contamination, buried construction debris and tanks may be present.

Economic Units 17, 18, 19, 20

Economic Units 17, 18, 19 & 20 are located in the northwest square of the subject property. The property is identified as Square 702 Lot 862, 863, 864, & 865. The address is listed as 13, 15, 17, & 19 N Street SE. The existing DC tax property detail indicates the owner is George J. Quinn SR Trustees. The land is currently improved by single family dwellings. There are a total of four brick buildings.

The title abstract was reviewed and indicates the fee simple title is in the name of George J. Quinn, Sr. Trustee. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

Additional investigation of this property is warranted to assess the interior. The interior of the facility should be accessed to determine the presence of PACBM and other environmental concerns.

Economic Unit 21

Economic Unit 21 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 79, 80, 81, 82, 83, 84, 85, 836, & 836. The address is listed as 1315-1317 Half Street SE. The existing DC tax property detail indicates the owner is the Federal Eagle Associates DC Ltd. The land is currently vacant and is operated as the ABC Towing Company. The land is currently used as a towing and dispatch yard. The area is paved and a number of stored vehicles were observed.

The title abstract was reviewed and indicates the fee simple title is in the name of Federal Eagle Associates LP. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property. The chain of title indicates Capitol Crane in the late 1960s.

Additional investigation for the presence of petroleum contamination from the current use as a vehicle towing, repair and storage facility and the historic use as a crane company is indicated.

Economic Unit 22

Economic Unit 22 is located in the northwest square of the subject property. The property is identified as Square 702 Lot 870 & 871. The address is listed as 1331 Half Street SE. The existing DC tax property detail indicates the owner is the 1331 Half Street Corporation. The land is currently being operated as Weber's Volvo Truck and is a service operation. This site is also known as Whites Volvo Trucks.

The title abstract was reviewed and indicates the fee simple title is in the name of 1331 Half Street Corporation. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

There were two USTs reported to have been removed from the property.

A 250 Gallon AST was observed and contained fuel oil.

Two in-ground hydraulic lifts were observed and are out of service. The tanks are above ground and are reported to have been drained. There are subsurface vaults or pits associated with the lifts.

Potential asbestos floor tile was observed and a sample of window glazing compound was collected and was found to be asbestos containing material.

An LBP samples was collected from the exterior window sill and was found to lead based paint.

There was minor staining observed at various locations that is typical of vehicle repair facilities.

There are several drums and containers of various products typically associated with vehicle repair facilities.

A vent pipe was observed at the north east corner of the facility. There was no obvious fill port, but there is an elevated potential that a tank is present at this location.

The remnants of a dispenser island and several pipes protruding from the ground were observed at the facility and there is an elevated potential there is a UST at this location.

A potential vent pipe was observed in the interior yard against the building. Minor dumping in this area minimized the potential to find a fill port, but this indicates the potential presence of a tank.

The 1937 Baist's Real Estate Atlas indicates this location was previously partially occupied by the Action Fuel Company.

The 1991 Sanborn Fire Insurance maps indicate this location was previously occupied by a truck sales and service company.

The DCEHA Data Base indicates that two gasoline USTs were removed from the property and that the Division closed the case.

Two groundwater monitoring wells were observed on the subject property. These are located in the south west corner of the property and at the front of the property along Half Street SE. The two samples of groundwater collected and submitted for analysis indicated the presence of MTBE typically associated with a petroleum release, but did not otherwise indicate elevated levels.

A limited Phase II investigation was conducted. A total of four borings were advance in the enclosed yard to an overall depth of 16 feet. The boring logs indicate the presence of potential fills and buried construction debris and water was encountered at 10-12 feet. Soil and groundwater samples were collected and submitted for analysis. The results indicate the presence of gasoline range organics in boring number 2 at a depth of approximately 11 feet below ground surface, but did not otherwise indicate elevated levels based on the limited amount of data collected.

Based on the available information regarding this property the following remediation and investigations are indicated:

- Remove 250 AST
- Remove two in ground hydraulic lifts
- Dispose of Drums
- Dispose of Minor Debris
- Investigate & Remove Gas tank and Island

- Investigate & Remove tank at NE Corner
- Investigate & Remove tank in Interior Yard
- Assess soil and groundwater contamination from Removed tanks and lifts
- Abandon two Groundwater Monitoring Wells

Economic Unit 23

Economic Unit 23 is located in the northeast square of the subject property. The property is identified as Square 703 Lot 5. The address is listed as 1338 Half Street SE. The existing DC tax property detail indicates the owner is the Patricio Ghiglino. The land is currently improved by an industrial warehouse and is operated as an artist studio and art school. The structure is two story brick and masonry structure and appears to be well maintained and extensively renovated. A new electric service with step down transformer was recently installed to service the facility. The facility is currently used for glass-working, metal working, stone carving, and sculpture.

The facility is used for glass-working, metal working, stone carving, and sculpture. There is a small metal plating operations present on the site. Products associated with these operations include a variety of different chemicals, dyes, powdered materials and other materials associated with the artistic process. Flammable gases are used for metal working and glass production. The materials and cylinders appear to be properly stored and are at a low risk of a potential release from current operations.

The site was historically used as the Highs Ice Cream manufacturing facility and Sign Store, Carpet Manufacturer and a mechanical shop.

The 1937 Baist's Real Estate Atlas indicates this location was previously occupied by a sheet metal facility.

Economic Unit 24

Economic Unit 24 is located in the northeast square of the subject property. The property is identified as Square 703 Lot 6 & 7. The address is listed as 1326 Half Street SE. The existing DC tax property detail indicates the owner is E M Warring. The land is currently improved by a two story masonry and brick building with concrete and wood floors.

Several type of potentially asbestos containing materials was observed during the site reconnaissance. These included one by one foot fibrous ceiling tiles, Ceiling tile mastic, 9 inch by 9 inch floor tiles, pipe insulation, Celotex, and boiler insulation. There are several rooms that have cork insulation and may have an asbestos containing mastic or binder. Samples of brown coat plaster, cork sealant, ceiling tile, black floor tile were collected and did not identify asbestos fibers based on the limited sampling performed. Samples of Boiler insulation, debris located on lot, cork sealant in cold storage room, tan and brown floor tile were identified as asbestos materials.

Located on the Northwest exterior wall is an emergency disconnect that has the potential to be associated with an underground storage tank. No vent or other surficial indications were observed.

The site is listed as a RCRA small quantity generator, and is listed in the CERCLIS-NFRAP data base as designated as no further action based on an incident and investigation in the 1980s.

The property was previously used by Highs Ice Cream Plant.

Based on the available information an asbestos inspection should be conducted and an assessment for the potential release of petroleum products and solvents from the drum storage.

Economic Unit 25

Economic Unit 25 is located in the northeast square of the subject property. The property is identified as Square 703 Lot 8. The address is listed as 1318 & 1320 Half Street SE. The existing DC tax property detail indicates the owner is Joseph Lukaesko. The land is currently improved by a two story steel frame and masonry building that is used has been operated as a brake service facility since the 1970s.

The title abstract was reviewed and indicates the fee simple title is in the name of Joseph Lukaesko. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property. The review indicated a 1938 agreement with Smoot Sand and Gravel to construct a party wall.

The facility was previously operated as the Atlas Machine Company.

A 500 gallon waste oil AST was observed inside the building.

Four drums of antifreeze and motor oil were observed and appear to be properly stored.

The plaster ceiling and walls have the potential to be ACM.

The use of the facility as a Brake service indicates there may be asbestos containing dust located on building structures that should be further examined and if present should be remediated prior to demolition.

The 1937 Baist's Real Estate Atlas indicates this location was previously occupied by the Atlas Machine Company.

Based on the available information additional investigation is indicated to further assess potential friable ACM, asbestos contamination on interior structures and the potential for petroleum contamination from past and current operations.

Economic Unit 26

Economic Unit 26 is located in the northeast square of the subject property. The property is identified as Square 703 Lot 53. The address is listed as 60-80 O Street SE. The existing DC tax property detail indicates the owner is the SE Land Development Association. The land is currently a flat paved lot. The site is reported to have been used for Washington Metropolitan Area Transit Authority bus storage for the past 30-40 years.

A vent pipe potentially associated with a UST was observed in the South East corner of the lot.

There is an oil water separator is located at the end of a concrete swale in the SE corner of the lot.

The presence of staining and vehicle leakage was observed and is typical of that associated with vehicle storage.

Concrete swale for leaking buses located on South Side of property leading to drain and the Vortech systems.

Trench drain located at East side of property by curb.

Vortech System in an underground vault in SE Corner was observed. The Vortech system is a storm water management and treatment system.

The 1937 Baist's Real Estate Atlas indicates this location was previously occupied by the Hereford Used Building Materials Company.

The 1991 Sanborn Fire Insurance maps indicate this location was occupied by Metro Bus Parking.

The 1959 Sanborn Fire Insurance maps indicate this location was previously occupied by a junk yard and scrap iron operation and a contractor's yard with an auto repair facility.

Based on the use as a bus parking facility for an extended period of time and the historic use of the property as a junk yard, and Auto repair facility additional investigation for the presence of petroleum contamination is indicated.

Economic Unit 27

Economic Unit 27 is located in the northeast square of the subject property. The property is identified as Square 703 Lot 54. The address is listed as 1315 First Street SE. The existing DC tax property detail indicates the owner is the WSI Acquisition Company. The land is currently improved with two adjoining metal prefabricated structures with large rollup doors and concrete floors. The northern building is operated as the Eastern Transwaste Facility and is a municipal waste transfer facility. The southern building is operated as ETW Recycling.

Mr. Greg Pettit was contacted to arrange access to the facility and declined to allow access. Interior assessment of the facility was not performed by the field personnel.

There is a 300 gallon AST visible from First Street SE.

The operation as a waste transfer facility indicates the potential for a number of environmental concerns and additional investigation is warranted. There is an elevated potential that solvents, paints, heavy metals, and other contaminants may have been introduced into the waste streams. The facility is on a concrete slab that may limit the transport of contaminants into the environment.

The 1991 Sanborn Fire Insurance maps indicate this location was previously occupied by waste paper operation and a saw and tool Mfg site.

The 1928 Sanborn Fire Insurance maps indicate this location was occupied by Auto Stalls.

Based on the current use as a waste transfer facility additional investigation is warranted to access the interior of the facility and to conduct a Phase II investigation to determine the presence of environmental contaminants associated with the waste transfer process and historic use.

Economic Unit 28

Economic Unit 28 is located in the northeast square of the subject property. The property is identified as Square 703 Lot 819, 821, & 822. The address is listed as 65 N Street SE. The existing DC tax property detail indicates the owner is RLG Realty Company Inc. The land is currently improved with a masonry, concrete and steel frame prefabricated building. The site is currently occupied by the Reston Limousine Service Company and is used for vehicle service, repair, parking and storage. This operator is reported to have occupied the facility for the past 2 months.

The site was historically used as a salvage yard.

There were two temporary groundwater wells installed inside and outside the building.

A paper product with the potential to be an ACBM was observed on the ceiling. The material was too high to be able to access for sampling.

The 1928 Sanborn Fire Insurance maps indicate this location was previously occupied by the Fletcher Fire Proofing Company.

Additional investigation is warranted to assess the potential presence of environmental contaminants associated with the presence of temporary wells, the current operation as a vehicle service facility and the historic use as a junk yard. The wells should be properly abandoned.

Economic Unit 29

Economic Unit 29 is located in the southwest square of the subject property. The property is identified as Square 704 Lot 11. The address is listed as 40 P Street SE or 1400-1430 South Capitol Street. The existing DC tax property detail indicates the owner is the Government Services Inc. The land is currently improved by a one story masonry and brick structure with large rollup doors to allow vehicle access. The facility is reported to have been constructed in the 1940s. The United States Capitol police currently occupy the facility and operate it for vehicle processing, construction material storage, Office Furniture Storage and food refrigeration.

There is a hazardous material storage area located in the building that is not currently used.

The site contact reported that testing and abatement of asbestos material was performed approximately five years ago.

Drywall, Cork Sealant, and cementitious material located on the door to the cold storage area were observed and considered to a potential ACM.

The facility is equipped with the original light fixtures.

GSI uses the North east portion of the building and did not allow access to this area.

A masonry addition to the original structure has a placard identifying it as a flammable storage area.

The 1959 Sanborn Fire Insurance maps indicate this location was previously occupied by the Government Services Inc. Commissary and was made of fireproof construction.

A vent pipe and potential fill port were observed located at the northwest side of the building along South Capitol Street SE. This is typical of a UST storage tank.

Just south of this tank and vent there is a fill and vent that appear to be consistent with an interior above ground tank.

The available data on the asbestos removal event that occurred approximately 5 years ago should be obtained and reviewed to ensure the ACM liability has been adequately abated. The additional ACM material should be fully quantified. Samples of asbestos material were collected from a cork sealant, drywall, a cementitious material in the cold storage room, wall plaster and were not identified to be ACM based on the limited sampling performed.

The existing light system has the potential for PCB Ballasts and mercury containing florescent lights and these should be removed and properly disposed.

Investigate and Remove Potential UST

Investigate and Remove Potential AST

Economic Unit 30

Economic Unit 30 is located in the southeast square of the subject property. The property is identified as Square 705 Lot 15. The address is listed as 60 P Street SE. The existing DC tax property detail indicates the owner is Roubin Associates LLC. The land is currently used as an asphalt manufacturing plant.

The title abstract was reviewed and indicates the fee simple title is in the name of Roubin Associates LLC. The title abstract package was reviewed and did not provide information on potential environmental issues associated with the property.

There is a low area in the NE corner of the subject property that is used as a vehicle wash and this is equipped with a drain and potentially a sand filter. There is a site trailer and the asphalt paving processing equipment.

There are 3 above ground storage tanks observed on the subject property. These include a 10,000 gallon No. 2 fuel oil tank, a 1,000 gallon asphalt additive tank and two 10,000 gallon liquid asphalt tanks.

A building located in the NE corner of the property was demolished approximately two years ago.

The facility has been operated as an asphalt plant for 20 years or more and the previous owner was Senate Asphalt.

Unmarked subsurface electrical equipment was discovered during an excavation on the site and was damaged, repaired by PEPCO and left in the ground.

The asphalt manufacturing facility is operated under a DCEHA Air Quality Division Permit PM-5697 issued in January of 2005. This permit was issued as a result of an air emissions consent agreement between owner and DEHA agreed to in November of 2004.

The 1937 Baist's Real Estate Atlas indicates the north east corner of this Square was previously occupied by McGuire and Roth Contractors and an asphalt plant.

The 1977 Sanborn Fire Insurance maps indicate this location was previously occupied by the Walmouth Paving Company and indicates the presence of a several tanks.

The DC EHA Data base indicates the site is an open LUST site with a total of 8 USTs having been closed at the site. The DCEHA information is presented in Appendix 9. The site is being remediated using Oxygen Release Compound (ORC) for fuel oil. A total of seven Groundwater Monitoring wells are indicated on the property. Site investigation personnel

were not able to locate any of these wells due to site traffic and occupancy patterns. No free product was reported to DCEHA to have been observed in the groundwater monitoring wells. The site is considered to be low risk, but there is the presence of a tar-like fuel oil indicated in the Site Summary.

In January of 2005 the operator of the site applied for a permit to install 2 wells to test and treat residual contamination. In November of 2004 the DCEHA issued a directive to install ORC sample wells and Submit a report. A September 2002 letter from Greenhorne & Omara indicated elevated levels of TPH-DRO and GRO in Groundwater. A September 1999 Directive Letter from DCEHA required the owner to perform a Comprehensive Site Assessment of the property. Based on the information available from the DC EHA there have been a number of underground storage tanks removed from the site and a series of directives and site inspection have been performed. A work plan from Greenhorne and Omara indicates that seven tanks were removed from the property in 1999. Additionally a 15,000 tank was removed along with 1521 tons of contaminated soil. The work plan details a sample and analysis strategy for assessing the site. There was no data in the record available that documents this assessment was completed. Based on the data available additional investigation of this site is indicated.

Based on the review of the DC EHA data, the open LUST Site and the present and historic use as an asphalt plant additional Phase II investigation is indicated. This should include data collection to compile the environmental work previously performed at the site and to collect and assess current levels of residual contamination. Based on the available data there is significant soil contamination and the potential for groundwater impact.

Economic Unit 31

Economic Unit 31 is located in the southwest square of the subject property. The property is identified as Square 706 Lot 802. The address is listed as South Capitol Street SE. The existing DC tax property detail indicates the owner is the Square 706 LLC. The land is currently vacant.

The 1977 Sanborn Fire Insurance maps indicate this location was previously occupied by a used drum facility.

Based on the review of the present and historic use of the property as a drum storage yard, a Phase II investigation is indicated.

Economic Unit 32

Economic Unit 32 is located in the southwest square of the subject property. The property is identified as Square 706 Lot 806, 807 & 808. The address is listed as 31-41 P Street SE. The existing DC tax property detail indicates the owner is the Schroff Real Estate Company. The land is currently improved by a masonry and brick industrial warehouse. The building is currently leased to 3 tenants. The tenants use the property as construction offices, and a taxi cab service office and construction and asphalt paving equipment storage.

There are reported to be ASTs on the site in the 1960s.

A vent pipe typically associated with a UST was observed under the deck on the north side of the building at 2 locations.

There are a variety of drums stored on the property. There are approximately 15 drums stored in a containment area that is reported to contain antifreeze, ethyl glycol, hydraulic fluid, and transmission fluid. There are approximately 10 drums that are stored outside the containment and are reported to be empty.

Ceiling tiles, floor tiles, and wallboard were observed and sampled at the Your Way Cab Company. Samples were collected and submitted for analysis and did not identify asbestos fibers in the limited sampling performed. A wallboard sample was collected from the Lane Construction office and submitted for analysis and did not identify asbestos fibers in the limited sampling performed.

Lead Based Paint samples were collected from the exterior of the building on the north side and were not identified as LBP.

A gravel ramp was installed for the Your Way Cab Company.

Minor oil staining was observed and is typical of vehicle and equipment storage areas.

There is approximately 20 cubic yards of waste material stockpiled on the site inside the Your Way Cab Company.

There is a steel plate that appears to be covering a subsurface circular steel vault in the equipment yard.

Inside the Your Way Cab Company yard is also a covered subsurface structure.

There are three above ground pole mounted electrical transformers located on the north side of the building.

Past uses of the property include Genstar Stone Products, Concrete mixing plant, and truck storage. Genstar had aboveground storage tank located on the property in the 1960s.

The building is reported to have been constructed in 1960-1961.

The DC EHA data base indicates that one UST was removed from the property and that the site is not considered to be a LUST site and the case is closed.

Economic Unit 33

Economic Unit 33 is located in the Southwest square of the subject property. The property is identified as Square 706 Lot 809. The address is listed as 1522 South Capitol Street SE. The existing DC tax property detail indicates the owner is the William LP Genstar Stone Products. The land is currently reported to be an Industrial Warehouse. The site is listed as an historic asphalt plant and is currently used for asphalt and truck parking.

The site is listed as an historic asphalt plant and is currently used for asphalt and truck parking. A significant amount of asphalt products were observed collecting under the trucks.

Additional investigation of this site for the presence of petroleum contamination is indicated.

Public Space

According to the District of Columbia's Office of Property Management, the total size of the Proposed Baseball Stadium Site is approximately 19 acres, with 13.83 acres of private property. The remaining portion consists of streets, alleys, rights of way, easements, and

the land located at the south east corner of the property bounded by Potomac Street SE on the south, Half Street on the west, P Street on the north.

Based on the known environmental issues associated with the properties in the footprint of the site it is reasonable to assume the public space will also have been impacted. There are significant issues with up-gradient offsite sources that should be evaluated. The natural groundwater gradient for the area is South and East to the Anacostia River. There is the potential that groundwater flows may be significantly influenced by the dewatering systems for the building construction sites located at the Federal Center to the East and the Metro Station located on M Street SE.

Based on the available information for the site additional investigation is recommended and should include soil boring and groundwater monitoring wells to assess offsite impacts and current conditions in the public spaces. Due to the relatively high density of subsurface utilities in the area the Public Space permitting process will require an extensive effort and need to be based on scaled drawings of the locations.

V. Infrastructure Costs

To determine the infrastructure cost impact resulting from construction of the proposed stadium, we conducted several site tours of the Site as well as the surrounding areas, including the Navy Yard Metro Station. The site tours were limited to areas accessible to the general public and did not include any probing, testing or engineering measurements of the various infrastructure systems located at the site.

In addition, we contacted agencies currently providing utility services and roadway access to existing businesses and residences at the Site. The agencies provided information regarding existing site conditions as well as the potential costs to disconnect, remove and relocate existing utilities from the footprint of the Site to the perimeter of the Site, including gas lines, water and sewer lines, electric ducts, man-holes and vaults, communications ducts, cable, pull boxes and roadways.

On the basis of our site tours, our discussions with the various agencies as well as site plans, maps, surveys, construction standards and other data provided by the agencies or otherwise acquired during the course of our work, we developed an infrastructure cost estimate for costs related to site utilities, tunnel protection, site improvements, roadway improvements and Navy Yard Metro Rail Station improvements, summarized in **Figure 4**. This cost estimate is described in further detail below and itemized in **Appendix D**.

Figure 4: Infrastructure Cost Estimate Summary

Description	Cost Estimate
Site Utilities - Inspection, testing, removal and the relocation of existing utilities on the footprint of the proposed site: <div> Water, Gas and storm Drainage: \$3,201,074 Estimated cost provided by Pepco: \$10,000,000 Estimated cost provided by Comcast: \$250,000 Estimated cost provided by Verizon: \$1,500,00 </div>	
Tunnel Protection - Relocate the tunnel & sanitary sewer lines under the footprint of the Baseball Stadium. If the stadium can be designed so as not to impact the tunnel, the cost to protect the tunnel (in lieu of the relocation costs shown here) is estimated to be \$2,275,207.	\$29,439,421
Roadway Improvements - This is typical for Potomac Avenue, N Street and 1st Street up to M Street: demolition & roadway excavation, new sidewalk, new curb & gutter, new street lighting, trees, striping, milling of existing pavement, 2" overlay, and new drainage. 1st Street SE Improvements (Between Potomac Avenue & M Street)	\$5,683,541

N Street SE Improvements	\$3,020,252
Potomac Avenue SE Improvements	\$3,230,710
Navy Yard Metro Station - Improvements per Metro recommendations to accommodate approximately 15,000 passengers/hour, including adding fare gates and the extending the mezzanine to accommodate increased passenger flow. The necessary scope of work was provided by WMATA.	\$ 19,892,647
Infrastructure Total	\$76,217,645

Discussion of the Infrastructure Cost Estimate

Site Utilities and Sewer

Our cost estimate includes the overall cost impact to existing infrastructure as well as future stadium requirements. For convenience, we present the infrastructure issues by agency:

Washington Gas Company

The Washington Gas Company (WGC) is currently providing gas service to the Site and to adjacent properties. WGC provided a drawing showing the high pressure and low pressure gas lines at the proposed site. According to our discussions with WGC, several high and low pressure lines have to be relocated, which will result in relocation costs, a carrying charge, charges for pressure improvement cost due to changes in demand as well as charges due to abandonment of connection and purge costs (our estimate, contained in **Appendix D**, includes these costs)

According to WGC the gas lines in this area have the capacity to meet the demands for a future Baseball Stadium and there are no connection charges for large customers, so additional costs beyond the relocation costs are not anticipated.

Based on the information received and discussions with WGC, we prepared a cost estimate for the removal and/or relocation of existing gas lines identified on WGC's site drawing. The cost estimate assumes the following:

- Relocate the 8" high pressure gas line from the west side to the east side of First Street SE to clear the construction area.
- Relocated the 4" low pressure gas line from the south side to the north side of N Street SE to clear the construction area.
- The existing gas lines will be connected in 11 locations to the new low pressure line.
- Estimate includes dewatering due to location.
- Estimate includes WGC abandon, purge charges and markups.

DC Water and Sewer Authority

The District of Columbia Water & Sewer Authority (WASA) is currently providing Water and sewer service to the proposed site and to adjacent properties. WASA provided drawings showing existing water and sewer lines at the proposed site.

Water Lines: WASA provided information on water lines that can be abandoned or removed and on water lines that need to be relocated in order not to interrupt water service to the customers in the area. This includes the installation of a 12" water line from South Capitol to First Street SE and north towards N Street SE in order to abandon existing water lines in O Street SE, P Street SE and Half Street SE.

We have prepared an estimate for the cost of new water connections and tie-ins as well as fire water lines and hydrants at the proposed Baseball Stadium site. According to WASA the water lines in this area have the capacity to meet the demands for the Ballpark.

Fire Water lines:

- Estimate includes Installed 8" perimeter fire water line to serve new Ballpark.
- Install 12 fire hydrants with gate valves.
- Estimate includes dewatering due to location
- Estimate includes fire water connection to existing lines.
- Estimate Includes WASA inspection and connection fees.

Domestic water:

- Install (N) 12" CI steel pipe from South Capitol to First Street SE and up to N Street SE.
- Estimate includes connect and install gate vales in 3 locations.
- Estimate includes dewatering due to location
- Estimate Includes WASA inspection and connection fees.
- Estimate includes removal /abandon existing water lines and fire hydrants

Sewer lines, There is an 11'- 6" Diameter reinforced concrete tunnel located on Half Street SE turning on O Street toward the O Street Pump Station. Drawings show 36 feet of cover from street level at N Street SE and 21 feet of cover from street level near First Street SE.

A second sewer line is 48" diameter located along O Street SE from South Capital to First Street and ending in the pump station. Drawings show a 44 feet cover near Half Street SE and 28 feet cover near First Street SE.

According to WASA the sewer lines in this area have the capacity to meet the demands for the Ballpark.

At the time of our analysis a ballpark design has not yet commenced, and therefore we do not know the foundation depth. Therefore, we have made some assumptions and prepared a budget cost allowance for each.

Our estimate assumes that the foundation of the ballpark will exceed 20 feet deep and will therefore require the relocation of the 11'- 6" tunnel and the 48" sewer line. The cost for relocating the sewer tunnel is significant, and without specific knowledge of the existing soil conditions and the absence of detailed profile drawings we can only provide an order of magnitude estimate based on the following assumptions:

- Estimate assumes that the tunnel will be relocated to an area where the excavated materials will have some rock or large boulders, this a common condition for sites near the river.
- Estimate assumes the depth of north and south access shaft to be 80 feet

- Estimate assumes the length of the relocated tunnel to be 2,000 feet.
- Estimate assumes the use of a Tunnel Boring Machine (TBM)
- Estimate assumes tunnel to be lined.
- Estimate includes dewatering due to location.
- The relocation of the 48" sewer line assumes a length of 1,000 feet.
- This area assumes to be located between Half Street SE and past First Street SE.
- Estimate Includes DCWASA inspection fees.

If the Ballpark is designed such that the foundations are 20 feet or less from street level and will not require removal of the tunnel or the 48" sewer line, we have developed a cost estimate to provide tunnel protection. The assumptions for tunnel and sewer line protection are based on paragraph 2.3 "Construction over Existing Water and Sewer Pipelines", DC Water and Sewer Authority, Project Design Manual, Volume 3 Infrastructure Design, which allows construction of a new building over a sewer line with certain conditions itemized in an easement with hold harmless covenant. The cost of this option would be \$2,275,207.

For estimating purposes we assumed 8 locations in the tunnel that will require protection. These structures were estimated using the WASA Project design Manual, Figure 3-B2-1 Construction over Existing Sewers. The same assumptions were used for the 48" sewer line except we assumed 6 locations that will require protection. These assumptions include:

- Estimate assumes that sewer Tunnel and 48" sewer line will not be relocated.
- Estimate assumes bottom of ballpark foundation will be less than 20Feet from street level.
- The assumptions for tunnel and sewer line protection are based on paragraph 2.3 "Construction over Existing Water and Sewer Pipelines. DC Water and Sewer Authority, Project Design Manual, Volume 3 Infrastructure Design.
- For estimating purposes we assumed 8 locations for the tunnel that will require protection and 6 locations for the 48" sewer line.
- Tunnel protection assumes grade beam 4'W x 6'H x 27' long.
- 48" sewer protection grade beam 4'W x 6'H x 20' long
- Pile caps 2 each 6' x 6' x 3' deep, same in both cases.
- Piles 4' diameter, 20' long, 2 each, for tunnel protection.
- Piles 4' diameter, 12' long, 2 each, for sewer protection.
- Estimate includes dewatering due to location.
- Estimate assumes installation of 18"sewer lines to service ballpark.
- Estimate Includes DCWASA inspection and connection fees.
- Estimate assumes that the cover on the 48" line is below 30 feet covers the area between Half Street SE and First Street SE.

PEPCO Ducts/Lines

PEPCO is currently providing electric power to the proposed site and to adjacent properties. PEPCO has provided a "rough ballpark conceptual estimate" of \$10 million. As of this report date, we were not provided with enough information to arrive at a cost estimate independent of the one provided by PEPCO or to determine whether other costs would need to be added to this number.

Comcast Ducts/Lines

Comcast is currently providing communication ducts and lines to existing structures within the footprint of the proposed site and adjacent properties via overhead poles. Comcast provided us a letter indicating that the costs to relocate the existing overhead ducts and lines would be \$250,000.

Verizon Ducts/Lines

Verizon is currently providing communication ducts and lines to existing structures within the footprint of the proposed site and adjacent properties. Verizon has indicated that the costs to relocate the existing network infrastructure to accommodate a Stadium would be \$1.5 million.

Roadway Improvements (\$11,934,503)

The District Department of Transportation (DDOT) provided us with the South Capitol Gateway Corridor and Anacostia Access Studies and Addendum 7. The study outlines numerous options (and associated costs), including a baseline estimate to cover costs attributable to the Stadium project totaling \$11.7 million.

The proposed baseline improvements formed the basis of our cost estimate and include:

1st Street SE (Between Potomac Avenue SE & M Street):

- Demolition of any existing sidewalk.
- Any roadway excavation & backfill.
- New sidewalk in both sides of the street.
- Provide new handicap ramps in all intersections.
- Improvement of existing storm drainage.
- New curb & gutter in both sides of the street.
- Provide erosion control.
- Milling of existing pavement for overlay.
- 2" thick Asphalt Concrete overlay including extension at intersections.
- Provide new trees at 30' o. c. in both sides of the street.
- Provide new street lighting at 50' o. c. in both sides of the street.
- New traffic signal in the intersection of 1st & M Street.
- New striping, and traffic signals.
- Traffic controls.

N Street SE:

- Demolition of any existing sidewalk.
- Any roadway excavation & backfill.
- New sidewalk in both sides of the street.
- Provide new handicap ramps in all intersections.
- Improvement of existing storm drainage.
- New curb & gutter in both sides of the street.
- Provide erosion control.
- Milling of existing pavement for overlay.
- 2" thick Asphalt Concrete overlay including extension at intersections.
- Provide new trees at 30' o. c. in both sides of the street.
- Provide new street lighting at 50' o. c. in both sides of the street.
- New striping, and traffic signals.
- Traffic controls.

Potomac Avenue SE:

- Demolition of any existing sidewalk.
- Any roadway excavation & backfill.
- New sidewalk in both sides of the street.
- Provide new handicap ramps in all intersections.
- Improvement of existing storm drainage.
- New curb & gutter in both sides of the street.
- Provide erosion control.
- Milling of existing pavement for overlay.
- 2" thick Asphalt Concrete overlay including extension at intersections.
- Provide new trees at 30' o. c. in both sides of the street.
- Provide new street lighting at 50' o. c. in both sides of the street.
- New stripping, and traffic signals.
- Traffic controls.

Our cost estimate does not include the cost of improvements required to South Capital Street since DDOT has already included these improvements in earlier site improvement plans which have been funded as part of a pre-existing capital plan.

Navy Yard Metro Yard Metro Rail Station Improvements (\$19,892,647)

The Washington Metropolitan Area Transit Authority (WMATA) Navy Yard Metro Station is the closest Metro station to the Stadium Site and is expected to handle a significant portion of Stadium patrons. WMATA has developed several options to increase station capacity to accommodate the expected increased passenger loads on game days. Based on our discussions with WMATA and a previously completed transit analysis by Gorove / Slade, we believe that "Option 2 – West Street Enhancement" which will accommodate up to 15,000 passengers per hour, is an appropriate option. We developed a cost estimate which assumed 4 ADA elevators (2 per level), an enlarged mezzanine level and additional escalators and kiosk / fare collections systems. Our detailed cost estimate is provided in **Appendix D**, and is in line with the \$19 million estimate provided by WMATA.

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